



# Train Like an Astronaut: Adapted Physical Activity Strategies

## Do a Spacewalk

### YOUR MISSION

You will perform the "bear crawl" and "crab walk" to increase muscular strength and improve upper and lower body coordination. You will also record observations about improvements in muscular strength and upper and lower body coordination during this physical experience in your Mission Journal.

### LINK TO SKILLS AND STANDARDS

**APENS:** 2.01.10.01 Understand variance in the progression of fundamental motor skill performance among individuals with disabilities

#### **Activity Specific Terms/Skills**

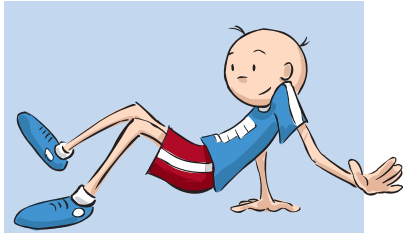
Gross motor skills, mobility, dexterity, flexibility

### SPACE RELEVANCE

Astronauts must develop muscular strength and coordination. In a reduced gravity environment, astronauts are unable to walk like they do on Earth. Instead, they coordinate their hands, arms, and feet to pull and push themselves from one place to another. Whether inside a space vehicle or outside doing Extra Vehicular Activities (EVA), strong muscles and coordination help astronauts move in space.

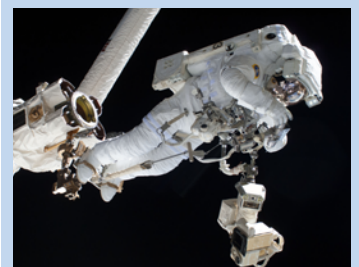
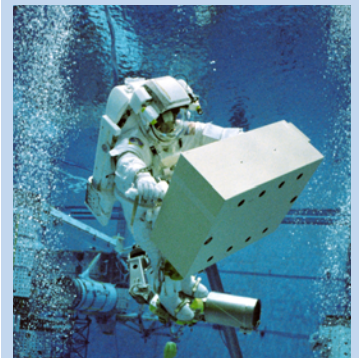
### WARM-UP & PRACTICE

- ▲ Use your hands to "walk the wall" (wall walk)
- ▲ "Astronaut Walk" or "Dead Bug" (walk like on Moon or lay on the ground and put one arm in air and opposite leg behind you)
- ▲ Bird dog (get on all fours and put one arm in air and extend opposite leg behind you)
- ▲ Raise both arms above head, and then raise one arm at a time above head
- ▲ Marching
- ▲ Any type of bilateral and alternating movement (wrist, arms, legs)



#### SUGGESTED ADAPTED EQUIPMENT:

- ▲ AB WHEEL
- ▲ THERA-BANDS
- ▲ SWIVEL CHAIR
- ▲ SCOOTER



# Do a Spacewalk

## LET'S "TRAIN LIKE AN ASTRONAUT!"

Measure a distance of about 12 m (40 ft).

### Bear Crawl:

- ▲ Get down on your hands and feet (facing the floor) and walk on all fours like a bear.
- ▲ Try to travel the measured distance.
- ▲ Rest for two minutes.
- ▲ Repeat two times.

### Crab Walk:

- ▲ Reverse the "bear crawl." Sit on the ground and put your arms and hands behind you, knees bent and feet on the floor. Lift yourself off the ground (facing upwards).
- ▲ Try to travel the measured distance.
- ▲ Rest for two minutes.
- ▲ Repeat two times.

Record observations before and after this physical experience in your Mission Journal.

## TRY THIS! *Some ideas for Adapted Activity*

- ▲ Use an "ab wheel" to move forward
- ▲ Move wheelchair foot rests, then using feet move forward in chair
- ▲ Let performer self-propel wheelchair/walker
- ▲ Permit partner to push/assist performer in wheelchair or with walker to use hand over hand assistance for retrieval and placement of items
- ▲ Use jump rope/rope to pull body through space (on scooter/carpet square)
- ▲ Lengthen distance
- ▲ Shorten distance
- ▲ Include extensions/reach grippers to assist performers with limited range of motion (ROM) or limb strength
- ▲ Attach preferred items along the desired distance to motivate the walker (toys, paper ribbons, stickers, balloons (if latex allergy does not exist), and sound emitting items (bell/beeper ball))
- ▲ Use verbal cues/caller, tether rope, sighted guide, or partner assistant to direct performer along on space walk; mark area in colored tape or textured boarder; color choice is dependent on performers needed
- ▲ Provide sentence or visual picture/ physical demonstration in order of instruction/steps to follow and complete task

